CONFIDENTIAL

WDDO

12 March 1958

MEMORANDUM FOR GENERAL SCHRIEVER

SUBJECT: Summary of Findings of WS-117L Management Project

1. The findings which follow are based upon a visit to Admiral Raborn's activity, reading of the development plan and other current -117L documents, and general knowledge of the program content through past association. Since the WS-117L Program Office is fully engaged at this time in a crash effort connected with the new development plan and fund requirements, it has not yet been possible to explore in detail either current procedures or possible future alterations in management procedures.

2. At the outset it is worth comparing the posture of the Atlas program when it was accelerated in 1954 with the current posture of the WS-117L program. In 1954 the ICBM program (Atlas only at that time) enjoyed the full time attention of a number of senior officers and a growing number of junior officers and civilians as well as substantial assistance from the R/D Corporation. In the main the specific help rendered by outside individuals such as Mr. Gardner, General Power, the Scientific Advisory Committee, etc., was positive and more or less continuous. The situation is considerably different relative to the WS-117L program today. It may be that it has played second fiddle to other local programs so long that it will be difficult to get a proper degree of acceleration and attention. In any event the amount of attention devoted and devotable by senior individuals to the program will have a major influence in its success or lack thereof - both schedule-wise and qualitatively. I take such matters seriously because I personally believe that serviceable satellites broadly utilized will have a much more constructive and powerful influence on all aspects of world affairs than either ballistic missile or man-in-space programs. The U.S. should lead in this and the Air Force must be its instrument.

3. Application of Polaris Management Techniques.

a. It seems an obvious fact that for WS-117L we cannot at this time gather into our hands in the local complex the same kind of systems management and technical direction as has existed in the missile programs since activities like Ramo AMC and Lockheed sub-contractors cannot be directly controlled by a line arrangement using R/W. Therefore it might be well to adopt a technique applied successfully by Admiral Raborn's people. This is the specific

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identification of responsible offices or people down to a significantly lower level of action and milestones than we do currently. In essence this would elaborate the current AFBMD technique of assigning responsibilities through office functional descriptions and through signature blocks on large groups of milestones assembled on charts.

b. There would be a net benefit in adopting at least as an interim measure Admiral Raborn's technique of creating a "Steering Task Group" chairmanned by an AFBMD individual and having representation from the interested contractors, military elements and others who contribute to the program.

(1) Admiral Raborn's Steering Task Group is composed as follows:

Special Projects Office SP 20 (Chairman)	Capt.L.Smith	Represents Admiral Raborn
Lockheed Missile System Division	Mr.W.Hawkins	- -
Bureau of Ships (Code 420)	Capt.E.Arentzen	Chief of Submarine Design
Chief of Naval Operations (OP-515)	Cmdr.P.H.Backus	Chief of Ballistic Missile Activities under Admiral Clark
Chief of Naval Operations (OP-311)	Capt.F.W.Walker	Chief of Submarine Warfare Branch under the CNO
Massachusetts Institute of Technology	Dr.C.S.Draper	- -
Atomic Energy Commission (UCRL)	Dr.H.Brown	- -
Naval Ordnance Laboratory	Dr.P.M.Fye	- -
General Electric	Mr.H.C.Borresdsen	- -
Aerojet-General Corporation	Mr.R.Geckler	- -
Westinghouse Electric Corporation	Dr.G.H.Mechlin	- -
Sperry Gyroscope Co.	Dr.W.L.Barrow	- -

(2) A comparable set of titles for the WS-117L program might be as follows:

Chairman	Represents General Schriever
Lockheed representative	
Convair representative	
Douglas representative	
Ramo-Wooldridge representative on the data processing system	
Ramo ADC representative	
Cambridge Research Center representative	
_____(1)	Whoever can represent the communications system involved
Intelligence representative	
Meteorological representative.	

It should be noted that the representative on Admiral Raborn's committee is fairly high level. The efficacy of such an arrangement depends upon this fact. We discussed the operation of the Group with Admiral Raborn and with his people. His working elements viewed the Group as a body of people who assembled every six weeks or so to solve important problems. Admiral Raborn seemed to view the same Group as a method for keeping the various agencies participating in his program happy through the device of frequent cooperative meetings at which they discover or discuss mutual problems. Admiral Raborn has a "board of directors" composed of himself and three or four key staff members who meet together when required to decide important issues. It is true that the situation with which Admiral Raborn has to deal in the Navy is different from the usual Air Force situation in that the bureaus are more tradition-bound and jealous of their prerogatives than comparable Air Force institutions. So far the Steering Task Group; plus Admiral Raborn's level of assignment; plus the priority of the program; plus the fact that many Naval personnel now see the end of surface warships has succeeded in keeping all the essential elements of the Polaris program pulling essentially in the same direction.

3. While not a management technique per se, there is a point of view relative to management held by Admiral Raborn and well propagated through his staff which is worth attention. It is represented by the attached diagram and its description. The "centers of authority" of concern to the Polaris effort are such institutions as BuShips, the AEC, Navy contractors, BuWeps and Docks, BuSupply and Accounts, etc. When asked how they would draw their own set of circles relative to such institutions, their reply was that they had the authority to direct any activity in the Navy within the scope of their project.

4. The Polaris program has not yet met with very many of the problems attending the onset of testing nor those attaining the commencement of operational use. However, participation by the user elements of the Navy as well as logistic and training elements seems to have been heavy and continuous. They are represented on the Steering Task Group. Many of Admiral Raborn's local staff have been drawn from such activities. A substantial Raborn office related to the Bureau of Personnel is in the process of being created. I mention this for the following reason. While SAC/HERE has done some preliminary planning relative to the concepts of employment, it is not entirely clear that the mundane, somewhat unattractive but nevertheless difficult problems of establishing and operating field activities are being identified and the initial implementing actions put underway soon enough to meet the requirements of the accelerated program. This may be an unjust remark since I've really not yet been able to delve particularly deep into these aspects. Admiral Raborn's Steering Task Group plus the backgrounds of the individuals selected for his activity seems to have given him an early start on these problems. On the other hand, both the Polaris office and the bureaus are dealing with relatively familiar objects while the WS-117L field operations have no particular precedents.

5. In considering the composition of a possible ARS "Steering Task Group" user-representation is worth some thought. Current planning is that the Strategic Air Command will operate the system. There are some pitfalls connected with this course of action in that SAC in no instance that I can remember has ever furnished a service to anybody except themselves. The ARS system in its daily operation is essentially a service activity which will furnish many kinds of data to many kinds of consumers - most of whom are not in SAC. It is conceded that SAC can develop the ARS operation so that it will furnish very fine strategic reconnaissance information to Headquarters SAC. I question whether that command is psychologically adapted to furnishing an equal quality of service to other possible consumers. For example,

communication usages and meteorological usages might be heavily underplayed. In fact these kinds of usages might be the very ones that we would want to accent as a matter of national policy as opposed to strictly secret intelligence uses aimed at a war-like purpose. The reason for bringing this up is that user representation, if possible, should cover all probable aspects of WS-117L utilization.

6. Recommendations.

a. That the Steering Task Group approach with technical, logistic and user representation be strongly considered for application to the WS-117L program provided that high enough level of representation is possible. This may be especially important from a "system engineering and technical direction" point of view since we may not be able to solve the R/W-STL problem for some months.

b. That specific assignment of responsibilities be made at somewhat lower level of action in the WS-117L program as compared to our ballistic missile programs. This would compensate for the fact that the current situation prevents us from having as firm a control of the ARS program as we have of the ballistic missile programs.

SIGNED

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1 Incl
Dynamics of HQ
Hqmt Staff Work